PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 00-1272-C)

In re Application of:	Chad A. Mirkin, et al.	
Serial No.	10/008,978	Examiner: TBA
Filed:	December 07, 2001	Group Art Unit: 1645
For:	Nanoparticles Having Oligonucleotides Attached Thereto and Uses Therefor	Confirmation No. 5877

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Commissioner for Patents
Washington, D.C. 20231

SIXTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In order to comply with discretionary regulations 37 CFR §§1.97 and 1.98, attached hereto is Form PTO-1449, copies[1] of the documents listed thereon. These documents contain information which the Examiner may consider to be important in deciding whether to allow the present application to issue as a patent.

1. Merrill, et al., U.S. Patent No. 5,830,986, issued November 3, 1998.
2. Lough, et al., U.S. Patent No. 5,900,481, issued May 4, 1999.
3. Goldberg, et al., U.S. Patent No. 6,203,989, issued March 20, 2001

[1]To the extent that a document is listed and no copy of same is attached, then such document is not at the present time available to the undersigned or is available in the file of a parent application. If a listed document is not in the English language and an English translation is readily available, such translation is also attached; if translation is not attached it is not readily available to the undersigned. If a foreign language patent document is cited, and an English language equivalent is known to the undersigned, then such equivalent patent is also cited on the attached form along with the corresponding foreign language patent and a connecting arrow indicated therebetween; if no such English language equivalent is cited, then none is known to undersigned.

4. Bawendi, et al., U.S. Patent No. 6,251,303, issued June 26, 2001.

5. Abbott, et al., U.S. Patent No. 6,277,489, issued August 21, 2001.

6. Bawendi, et al., U.S. Patent No. 6,306,610, issued October 23, 2001

7. Mirkin, et al, U.S. Patent No. 6,361944, issued March 26, 2002.

8. Wagner, et al., U.S. Patent No. 6,365,418, issued April 02, 2002

9. Mirkin, et al., U.S. Patent No. 6,417,340, issued July 09, 2002

10. WO 93/25709 published 23 December 1993.

11. WO 98/04740 published 5 January 1998

12. WO 98/17317 published 30 April 1998

13. WO 99/60169 published 25 November 1999

14. WO 00/33079 published 8 June 2002

15. WO 01/00876 published 4 January 2001

16. WO 01/51665 published 19 July 2001

17. WO 01/73123 published 4 October 2001

18. WO 01/86301 published 15 November 2001

19. WO 02/04681 published 17 January 2002

20. WO 02/18643 published 7 March 2002

21. WO 02/36169 published 10 May 2002

22. WO 02/46483 published 13 June 2002

23. WO 02/46472 published 13 June 2002

24. Letsinger, R., et al., "Chemistry of Oligonucleotide-Gold Nanoparticle Conjugates," *Phosphorus, Sulfur and Silicon*, Volume 144, p. 359-362 (1999)

25. Letsinger, R., et al., "Use of a Steroid Cyclic Disulfide Anchor in Constructing Gold Nanoparticle—Oligonucleotide Conjugates," *Bioconjugate Chem*, p. 289-291 (2000)

26. Li Z., et al., "Multiple thiol-anchor capped DNA-gold nanoparticle conjugates," *Nucleic Acids Research*, Volume 30, p. 1558-1562 (2002)

27. Nuzzo R., et al., "Spontaneously Organized Molecular Assemblies. 3. Preparation and Properties of Solution Adsorbed Monolayers of Organic Disulfides on Gold Surfaces, " *J. Am Chem. Soc.*, Volume 109, p. 2358-2368 (1987)

28. Otsuka, H, et al., "Quantitative and Reversible Lectin-Induced Association of Gold Nonoparticles Modified with α-Lactosyl-ω-mercapto-poly(ethyleneglycol)," *J. Am Chem. Soc.*, Volume 123, p. 8226-8230 (2001).

29. Wuelfing, P, et al, "Nanometer Gold Clusters Protected by Surface-Bound Monolaters of Thiolated Poly(ethylene glycol) Polymer Electrolyte," *J. Am. Chem. Soc.*, Volume 120, p. 12696-12697 (1998)

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

The present Disclosure Statement is being submitted in compliance with 37 CFR 1.56 insofar as an Examiner might consider any of the cited documents important in deciding whether to allow the application to issue as a patent, but the citation of each document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended

that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 CFR 1.104(a) and 1.106(b) and, in the course of each search, will review for relevance every document cited on the attached form even if not initialed.

Early and favorable consideration is earnestly solicited.

Dated: 1/23/03

Respectfully submitted,

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FORM PTO-1449
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00-1272-C	10/008,978

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

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Applicant:	
Chad A. Mirkin, et al.	
Filing Date:	**Group:**
December 7, 2001	1645

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Dat If Appr priate
	1.	4,996,143	02/26/91	Heller, et al.	435	6	04/13/90
	2.	5,508,164	04/16/96	Kausch, et al.	435	6	10/29/93
	3.	5,922,537	07/13/99	Ewart, et al.	435	6	11/8/96
	4.	5,972,615	10/26/99	An, et al.	435	6	01/21/98
	5.	6,264,825	07/24/01	Blackburn, et al.	205	777.5	06/23/99
	6.	6,214,560	04/10/01	Yguerabide, et al.	435	7.1	04/18/97

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No
	7.	WO 94/29484	12/22/94	PCT				
	8.	WO 00/25136	05/04/00	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

	9.	Mohanty J., et al. "Pulsed laser excitation of phosphate stabilized silver nanoparticles," *Proc. Indian Acd. Sci.*, Vol. 112, No. 1, p. 63-72.
	10.	Nicewarner- Peña S., et al., "Hybridization and Enzymatic Extension of Au Nanoparticle-Bound Oligonucleotides," *J. Am. Chem. Soc.*, Vol. 124, p. 7314-7323 (2002)
	11.	Whitesides G.M., et al., "Soft Lithography in Biology and Biochemistry," *Annu. Rev. Biomed. Eng.*, p. 335-373 (2001)

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation consider d, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

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